1981-82

INLAND WATERBORNE COMMERCE STATISTICS

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INTRODUCTION

Dear Friend:

The barge and towing industry is a vital segment of the U.S. transportation system. It consists of some 1,200 companies operating on a system of 25,543 miles of navigable inland and intracoastal waterways, serving 87 percent of major U.S. cities. It operates a fleet of 4,890 towboats and tugboats with a combined horsepower of 7.6 million, powering a fleet of 34,388 barges with a capacity of 49.9 million tons.

This book, Inland Waterborne Commerce Statistics, 1981-82, illustrates the growth and strategic importance of the industry by showing total tonnages and total ton-miles moved by the entire system and on each major navigable river, intracoastal waterway and canal.

A description of each waterway, with its navigable length, precedes each discussion. Net tons and ton-miles are shown for the early and middle 1970s, as well as for 1982. In the center of this book is a map, showing locations for each of the waterways discussed.

This book also shows that in 1982, the last year for which final figures are available, barges carried more than 617.8 million tons of freight, or about 64.6 percent of the close to one billion tons of total domestic waterborne traffic.

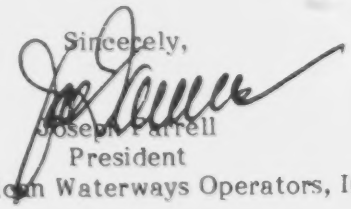
It demonstrates that over 60 percent of the products transported by barge are energy-related, i.e., 38.8 percent consist of petroleum and petroleum products and 22.5 percent consist of coal and lignite.

In addition to energy products, the industry moves grain and grain products (9.5 percent); chemicals (6.9 percent); sand, gravel and stone (7.4 percent); and, in substantial quantities, more than 100 other kinds of bulk materials, including iron and steel products, lime, fertilizer, logs, marine shells, etc.

The industry has three inherent advantages to offer shippers, receivers and the public. It is the lowest cost, most energy efficient and safest transportation mode.

The data are compiled from the latest reports issued by the Waterborne Commerce Statistics Center of the Army Corps of Engineers. The compilations and comparisons are prepared by The American Waterways Operators, Inc., and are published as a public information service.

Sincerely,



Joseph Farrell
President
The American Waterways Operators, Inc.

COMMERCIALLY NAVIGABLE WATERWAYS OF THE UNITED STATES BY LENGTHS AND DEPTHS[1]

Group	Lengths in Miles of Waterways					
	Under 6 ft.	6 to 9 ft.	9 to 12 ft.	12 to 14 ft.	14 ft. & Over	Total
Atlantic Coast Waterways	1,426	1,241	584	938	1,581	5,770
Atlantic Intracoastal Waterway-Norfolk, VA, to Key West, FL	—	65	65	1,104	—	1,234
Gulf Coast Waterways	2,055	647	1,133	79	378	4,292
Gulf Intracoastal Waterway-St. Marks, FL, to the Mexican Border	—	—	—	1,137	—	1,137
Mississippi River System	2,020	969	4,957	740	268	8,954
Pacific Coast Waterways	730	498	237	26	2,084	3,575
Great Lakes	45	89	—	8	348	490
All Other Waterways	76	7	—	1	7	91
GRAND TOTAL	6,352	3,516	6,976	4,033	4,666	25,543

[1] The mileages in this table represent the lengths of all navigable channels of the United States, including those improved by the federal government, other agencies, and those that have not been improved but are usable for commercial navigation.

1981-82 FREIGHT TON MILES BY MODE
(BILLIONS)

Mode	1981 Ton Miles	Percent	1982 Ton Miles	Percent
Air carrier	4.98	.2	4.9	.2
Oil pipeline	564	24.1	571	26
Rail	924	39.5	810	36.8
Highway	535	22.9	525	23.9
Inland waterways[1]	312	13.3	288	13.1
TOTAL	2,340	100	2,199	100

[1]Exclusive of Great Lakes

Source: National Transportation Statistics, Department of Transportation

BARGE TRAFFIC AND KEY ECONOMIC INDICATORS

Year	Barge Traffic (Millions of tons)	U.S. GNP ($ billion) (1972)	U.S. Industrial Production Index (1967=100)
1970	562.2	1,086	108
1971	581.3	1,122	110
1972	623.1	1,186	120
1973	625.1	1,254	130
1974	622.3	1,246	129
1975	610.0	1,232	118
1976	637.6	1,298	131
1977	640.2	1,370	138
1978	662.2	1,439	146
1979	656.6	1,479	153
1980	667.2	1,475	147
1981	658.2	1,514	151
1982	617.8	1,485	139

Sources: Waterborne Commerce of the United States, U.S. Army Corps of Engineers, annual, & Waterborne Commerce Statistics Center, U.S. COE
Survey of Current Business, Bureau of Economic Analysis, U.S. Dept. of Commerce, monthly
Statistical Abstract, Bureau of the Census, U.S. Dept. of Commerce, annual

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES
OPERATED FOR THE TRANSPORTATION OF FREIGHT AS OF MAY 1, 1982

Types of Vessels	Mississippi River System and the Gulf Intracoastal Waterway	Atlantic, Gulf and Pacific Coasts	Great Lakes System	Total
SELF-PROPELLED				
Towboats and Tugs				
Number of Vessels	3,161	1,589	140	4,890
Horsepower	4,989,480	2,468,191	143,620	7,601,291
NON-SELF-PROPELLED				
Dry Cargo Barges and Scows				
Number of Vessels	24,331	4,892	256	29,479
Cargo Capacity (net tons)	32,590,978	5,018,969	421,129	38,031,076
Tank Barges				
Number of Vessels	4,183	698	28	4,909
Cargo Capacity (net tons)	8,557,207	3,290,445	54,719	11,902,371
Total Non-Self Propelled				
Number of Vessels	28,514	5,590	284	34,388
Cargo Capacity (net tons)	41,148,185	8,309,414	475,848	49,933,447

Source: U.S. Army Corps of Engineers

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES
OPERATED FOR THE TRANSPORTATION OF FREIGHT FOR THE YEARS 1977-1982

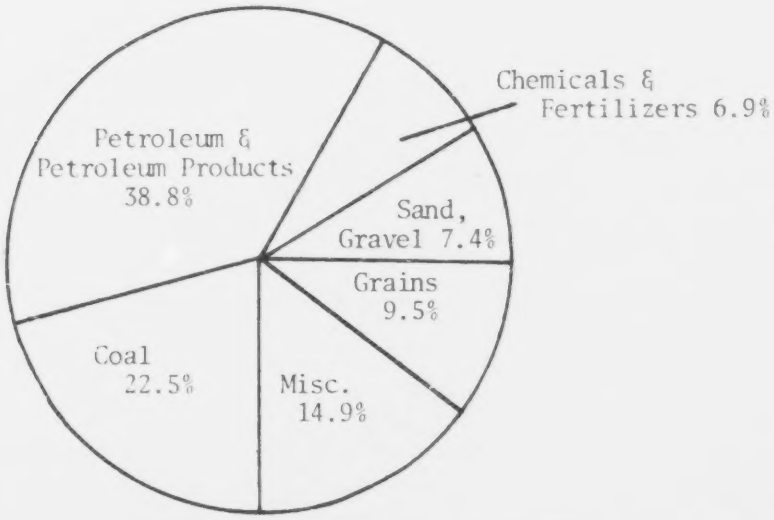
Types of Vessels	1977	1978	1979	1980	1981-82
SELF-PROPELLED					
Towboats and Tugs					
Number of Vessels	4,379	4,380	4,492	4,693	4,890
Horsepower	6,161,348	6,390,438	6,646,141	7,146,576	7,601,291
NON-SELF-PROPELLED					
Dry Cargo Barges and Scows					
Number of Vessels	24,937	24,037	25,420	27,426	29,479
Cargo Capacity (net tons)	29,454,921	29,838,851	32,093,068	34,486,851	38,031,076
Tank Barges					
Number of Vessels	3,770	3,946	4,000	4,166	4,909
Cargo Capacity (net tons)	9,519,840	9,467,565	10,334,677	10,388,265	11,902,371
Total Non-Self-Propelled					
Number of Vessels	28,707	27,983	29,420	31,592	34,388
Cargo Capacity (net tons)	38,974,761	39,306,416	42,427,745	44,875,116	49,933,447

Source: U.S. Army Corps of Engineers

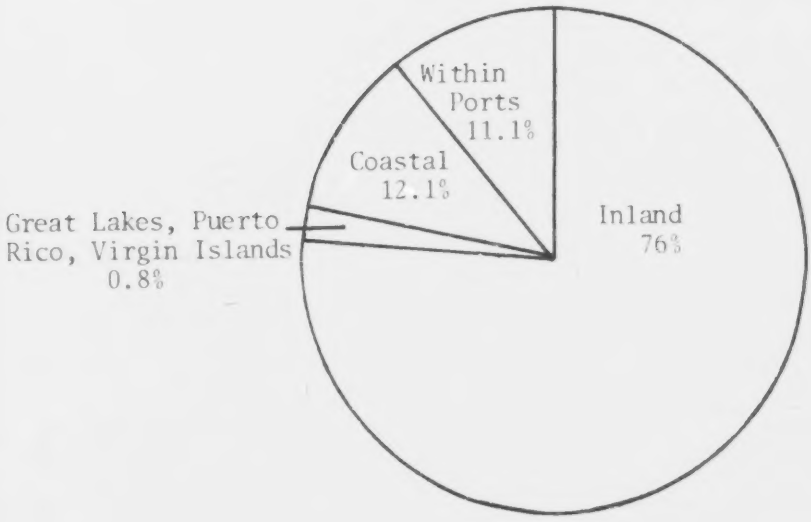
THE SCOPE OF THE BARGE AND TOWING INDUSTRY

The barge and towing industry carried 617.8 million tons of freight in 1982, 64.6 percent of total domestic marine traffic. Barge traffic moves on the inland waterways, within ports, on the coastal waters of the United States, on the Great Lakes and between ports in Puerto Rico and the Virgin Islands.

BARGE TRANSPORTATION BY COMMODITY



BARGE TRANSPORTATION BY WATERWAY SYSTEM



DOMESTIC BARGE TRAFFIC[1]
1970-1982
(Thousands of net tons)

Year	Grains	Coal	Petroleum and Products	Sand, Gravel and Stone	Chemicals and Fertilizers	Total All Commodities
1970	27,052	122,859	215,865	71,067	43,471	562,156
1971	28,324	113,963	232,641	79,460	46,496	581,314
1972	36,320	123,846	251,004	76,918	51,327	623,063
1973	35,984	120,711	256,504	78,705	49,846	625,146
1974	39,785	122,582	245,151	73,738	51,570	622,319
1975	44,434	130,683	244,000	65,851	46,612	610,039
1976	54,747	132,578	264,436	59,163	48,628	637,641
1977	52,324	133,992	270,942	56,793	54,182	640,163
1978	58,730	120,825	281,474	69,350	53,002	662,197
1979	58,991	135,953	260,473	67,670	56,316	656,648
1980	52,140	141,702	262,000	59,252	56,429	667,222
1981	56,781	151,151	255,938	47,923	53,021	658,210
1982	58,977	139,134	239,640	45,775	42,372	617,781

[1] Includes not only inland waterways traffic, but also coastwise shipments by barge. Thus, total annual tonnages will be somewhat higher than those reported on the following page.

MISSISSIPPI RIVER SYSTEM[1]
Net Inland Traffic
1980-1982
(Thousands of Net Tons)

Year	Grains	Soybeans	Coal	Petroleum and Products	Chemicals and Fertilizers
1980	45,775	15,470	122,984	77,253	31,560
1981	49,366	14,798	130,641	72,295	29,552
1982	52,453	19,216	121,163	69,128	24,230

Year	Sand, Gravel and Crushed Rock	Non-Metallic Minerals, n.e.c	Metallic Ores	Iron and Steel
1980	29,402	8,303	1,955	6,184
1981	25,641	6,849	1,938	6,645
1982	23,712	4,853	1,141	3,482

Year	Total All Commodities
1980	365,569
1981	362,930
1982	347,474

[1] Main channels and all tributaries of the Mississippi, Illinois, Missouri and Ohio Rivers.

OHIO RIVER SYSTEM[1]
Internal and Local Traffic
1980-1982
(Thousands of Net Tons)

Year	Grains	Soybeans	Coal	Petroleum and Products	Chemicals and Fertilizers
1980	6,119	2,373	103,782	21,129	11,867
1981	6,813	2,374	111,571	17,893	11,107
1982	9,930	3,642	104,599	17,071	9,306

Year	Sand, Gravel and Crushed Rock	Non-Metallic Minerals, n.e.c.	Iron and Steel
1980	18,006	4,823	3,166
1981	16,438	4,070	3,428
1982	15,410	4,443	1,776

Year	Total All Commodities
1980	179,322
1981	181,853
1982	173,997

[1] Main channels and all tributaries of the Ohio, Monongahela, Tennessee and Cumberland Rivers.

TRAFFIC TRANSPORTED ON INLAND WATERWAYS OF UNITED STATES
(Exclusive of Great Lakes)

Year	Net Tons Of 2,000 Pounds[1]	Ton-Miles
1940	183,417,791	22,411,961,000
:	:	:
1965	472,480,483	132,812,240,000
1966	489,066,210	164,528,798,000
1967	500,912,733	174,582,978,000
1968	520,904,639	179,336,707,000
1969	548,481,358	187,666,323,000
1970	553,598,222	204,084,966,000
1971	560,470,417	210,003,291,000
1972	597,255,337	229,754,230,000
1973	596,459,513	232,307,988,000
1974	599,219,554	247,430,888,000
1975	582,211,482	243,038,688,000
1976	607,703,665	267,216,851,000
1977	612,149,130	277,580,717,000
1978	624,015,527	290,396,521,000
1979	628,082,832	302,902,779,000
1980	629,162,723	310,845,090,000
1981	613,918,593	312,258,571,000
1982	571,055,177	288,047,430,000

[1] Known duplications resulting from reporting of identical shipments over two or more waterways have been eliminated except that the figures for 1965 and subsequent years represent originated traffic.

COASTAL AND COASTWISE TRAFFIC[1]

Year	Net Tons Of 2,000 Pounds	Ton-Miles
1958	194,050,174	304,770,000,000
:	:	:
1965	201,508,107	302,545,000,000
1966	208,374,966	306,766,000,000
1967	214,646,527	310,429,000,000
1968	214,250,535	304,480,000,000
1969	216,707,773	300,948,000,000
[illegible]	238,440,385	359,784,000,000
1971	242,916,056	360,205,000,000
1972	242,660,087	351,509,000,000
1973	236,794,660	327,649,000,000
1974	233,358,124	322,802,209,000
1975	231,932,437	315,845,946,000
1976	236,278,624	322,932,250,000
1977	248,083,336	343,536,591,000
1978	305,342,824	540,373,236,000
1979	304,665,522	532,290,272,000
1980	329,608,613	631,149,247,000
1981	321,989,988	634,765,277,000
1982	311,058,264	632,707,073,000

1 Applies to domestic traffic receiving a carriage over the ocean or the Gulf of Mexico, e.g., New Orleans to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, or Puerto Rico to Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also termed coastwise.

PRINCIPAL COMMODITIES TRANSPORTED ON THE INLAND WATERWAYS OF THE UNITED STATES (EXCLUSIVE OF THE GREAT LAKES) IN NET TONS OF 2,000 POUNDS—CALENDAR YEARS 1980, 1981 AND 1982

Commodity	1980	1981	1982
Grain and grain products	51,466,545	56,233,780	58,492,791
Soybeans	16,117,949	15,377,286	19,807,951
Fresh fish and shellfish	1,182,905	2,321,762	2,135,151
Menhaden	123,332	411,689	233,117
Marine shells, unmanufactured	9,241,183	8,029,683	6,230,520
Iron ore and concentrates	4,479,286	3,531,288	698,651
Aluminum ore and concentrates	493,841	310,294	217,207
Manganese ores and concentrates	510,122	850,502	182,979
Nonferrous ore concentrates, n.e.c.	720,312	549,277	379,623
Coal and lignite	138,513,379	147,513,423	136,244,775
Crude petroleum	47,608,856	39,303,749	37,503,032
Limestone	4,175,761	3,653,501	4,196,213
Sand, gravel and crushed rock	56,146,815	45,867,295	43,048,838
Clay and structural clay products	1,323,653	1,052,276	872,662
Sulphur, dry and liquid	4,796,450	4,575,197	2,866,822
Nonmetallic minerals, n.e.c.	4,952,326	4,093,385	4,764,301
Sugar	817,058	565,601	645,264
Molasses	415,836	435,794	517,003
Vegetable oils, margarine, shortening	1,570,339	1,253,516	1,127,863
Tallow, animal oils and fats	488,837	363,854	325,105
Animal feeds	4,243,540	4,063,354	4,547,210
Logs	705,666	411,579	280,107
Rafted logs	16,735,458	13,191,612	12,820,604
Pulpwood, log	1,431,776	1,475,777	1,070,950
Lumber and wood products, exc. furniture	2,264,706	2,048,923	1,678,841
Pulp	946,891	872,817	763,179
Paper and paper products	1,815,200	1,777,500	1,479,950
Sodium hydroxide	3,391,667	2,703,166	2,514,891
Crude tar, oil, gas products	1,363,495	1,361,469	1,149,837
Alcohols	2,394,883	2,291,087	2,332,891
Benzene and toluene	3,438,349	3,213,551	2,945,483
Sulphuric acid	2,223,203	2,059,379	1,543,178
Basic chemicals and products, n.e.c.	17,373,927	17,229,851	14,170,285
Fertilizer and fertilizer materials	9,240,973	8,250,781	7,403,791
Gasoline	35,437,397	33,780,837	32,072,289
Jet fuel	4,588,997	4,864,694	4,772,286
Kerosene	1,637,914	1,290,331	1,302,939
Distillate fuel oil	36,283,044	34,749,147	30,609,324
Residual fuel oil	81,023,439	82,329,906	70,159,042
Lubricating oils and greases	2,366,556	2,101,925	2,151,158
Naphtha, petroleum solvents	4,598,952	3,408,196	2,625,639
Asphalt tar and pitches	3,407,528	3,354,849	4,060,696
Coke, petroleum coke	3,929,544	4,146,643	3,724,581
Liquefied gases	987,918	1,188,535	1,109,389
Other petroleum and coal products	2,901,651	2,204,981	2,091,941
Building cement	3,767,641	4,568,938	4,659,371
Lime	1,128,344	1,286,041	1,370,448

(continued)

Commodity	1980	1981	1982
Slag	774,987	420,975	664,202
Iron and steel products (w/ferroalloys)	6,971,090	7,539,868	4,057,001
Iron and steel scrap	2,891,839	2,291,532	1,884,625
Waste and scrap, n.e.c.	15,564,979	18,903,173	22,125,370
Water	2,900,770	3,134,961	1,847,670
Other commodities	5,285,614	5,109,063	5,274,792
GRAND TOTAL	629,162,723	613,918,593	571,055,177

ALABAMA RIVER

SECTION: From Wetumpka, Alabama, to mouth at confluence with Mobile River - 313 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	1,333,058	120,520,255
1972	1,582,028	112,959,812
1973	2,149,004	151,317,633
1974	2,120,533	157,812,590
1975	2,247,812	190,050,504
1976	1,714,381	154,396,376
1977	1,684,117	138,769,529
1978	1,966,874	163,979,844
1979	2,028,366	230,942,373
1980	1,501,448	153,277,753
1981	2,159,397	206,735,516
1982	2,508,383	257,621,155

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain	29,696
Soybeans	54,383
Limestone	1,193,919
Sand, gravel, crushed rock	1,002,573
Pulpwood, log	68,550
Wood chips, staves, moldings	96,455
Fertilizer and fertilizer materials	24,330
Residual fuel oil	7,088
Miscellaneous	31,389
GRAND TOTAL	2,508,383

ALLEGHENY RIVER

SECTION: From Pittsburgh, at the confluence with the Ohio River, to above East Brady, Pennsylvania, improved portion - 72 miles

CONTROLLING DEPTH: 9 feet; open channel portion above East Brady

TOTAL ANNUAL TRAFFIC

	Improved Portion		Open Channel Portion	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	5,946,165	80,643,101	212,500	1,087,000
1972	5,425,369	80,024,511	72,892	422,034
1973	5,317,340	83,101,087	167,060	810,420
1974	5,532,052	87,302,440	130,332	808,110
1975	5,362,206	85,780,386		
1976	4,981,158	78,598,435		
1977	5,084,990	89,243,482	(No Commerce reported)	
1978	4,404,714	79,462,989		
1979	4,819,088	89,072,521		
1980	5,012,399	74,903,911		
1981	3,899,828	62,345,118		
1982	4,138,942	66,250,316		

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons Improved Portion
Ores and concentrates	16,044
Tallow, animal oils and fats	24,349
Coal and lignite	938,006
Sand, gravel, crushed rock	2,520,847
Clay	13,107
Nonmetallic minerals, n.e.c.	24,222
Wheat flour and semolina	26,751
Alcohols	55,272
Distillate fuel oil	24,456
Residual fuel oil	10,294
Lubricating oils and greases	216,502
Naphtha, petroleum solvents	9,310
Asphalt, tar and pitches	85,613
Coke, petroleum coke	16,749
Other petroleum and coal products	17,010
Ferroalloys	18,419
Iron and steel products	9,195

(Continued)

Commodity	Net Tons Improved Portion
Iron and steel scrap	98,507
Miscellaneous	11,289
GRAND TOTAL	4,138,942

APALACHICOLA, CHATTAHOOCHEE AND FLINT RIVERS

SECTION: The Apalachicola River from Apalachicola Bay to the confluence of the Chattahoochee and Flint Rivers, the Chattahoochee River to Columbus, Georgia (268 miles), and the Flint River to Bainbridge, Georgia (29 miles) - Total: 297 miles

* Gulf Intracoastal Waterway through-traffic over lower 6 miles of the Apalachicola River is excluded

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	898,087	97,957,858
1972	1,025,275	108,210,390
1973	1,024,890	124,189,253
1974	951,026	103,370,745
1975	811,862	85,902,387
1976	1,030,399	106,807,621
1977	1,070,165	135,546,345
1978	873,353	102,994,535
1979	889,884	97,187,372
1980	783,656	81,955,756
1981	648,932	62,534,181
1982	825,591	100,663,699

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Wheat	21,297
Soybeans	52,362
Sand, gravel, crushed rock	344,132
Basic chemicals and products, n.e.c.	38,000
Fertilizer and fertilizer materials	158,198
Gasoline	30,627
Distillate fuel oil	16,747

(Continued)

Commodity	Net Tons
Residual fuel oil	69,922
Asphalt, tar and pitches	82,189
Miscellaneous	12,117
GRAND TOTAL	825,591

ATLANTIC INTRACOASTAL WATERWAY

SECTION: From Norfolk, Virginia, to St. Johns River at Jacksonville, Florida - 739 miles

CONTROLLING DEPTH: 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,662,166	570,922,609
1972	4,361,217	691,882,360
1973	3,931,592	581,126,564
1974	3,537,217	531,899,709
1975	3,218,552	474,560,638
1976	4,470,292	589,392,930
1977	4,803,739	616,303,126
1978	5,094,836	569,411,311
1979	5,066,145	593,329,628
1980	3,996,144	484,204,055
1981	4,166,209	516,676,327
1982	3,196,634	375,610,083

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Grain	--	102,651
Soybeans	--	61,250
Fresh fish, except shellfish	--	44,773
Shellfish, except prepared	--	31,832
Menhaden	--	9,348
Nonferrous ores, concentrates, n.e.c.	--	10,632
Sand, gravel, crushed rock	--	305,112
Basic chemicals and products, n.e.c.	--	55,000
Sulphur, liquid	--	635,250
Sugar	11,385	21,458
Miscellaneous food products	--	20,109
Basic textile products	--	6,772

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway
Pulpwood, log	--	67,358
Wood chips, staves, moldings	--	67,683
Pulp	--	102,889
Paper and paperboard	--	60,537
Sodium hydroxide	2,703	32,200
Fertilizer and fertilizer materials	4,360	706,618
Gasoline	--	23,981
Jet fuel	--	146,811
Distillate fuel oil	--	9,570
Coke, petroleum coke	--	21,620
Residual fuel oil	--	282,109
Naphtha, petroleum solvents	--	3,668
Iron and steel products	--	143,735
Slag	10,000	--
Fabricated metal products	1,412	9,290
Machinery, except electrical	5,653	3,086
Electrical machinery and equipment	2,220	2,272
Commodities, n.e.c.	--	105,205
Ships and boats	12,522	90
Iron and steel scrap	--	35,041
Miscellaneous	4,170	14,259
GRAND TOTAL	54,425	3,142,209

ATLANTIC INTRACOASTAL WATERWAY

SECTION: From St. Johns River at Jacksonville to Miami, Florida - 349 miles

CONTROLLING DEPTHS: 10 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	869,289	25,217,290
1972	837,852	64,067,389
1973	1,182,475	44,880,349
1974	1,505,534	33,208,570
1975	1,228,098	24,462,086
1976	1,393,370	29,540,456
1977	1,269,218	36,537,889

(Continued)

Year	Net Tons	Ton-Miles
1978	1,187,362	18,429,315
1979	1,475,654	29,523,137
1980	1,214,075	29,349,629
1981	1,021,788	32,687,063
1982	1,103,955	29,729,405

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Fresh fish, except shellfish	--	9,813
Shellfish, except prepared	--	6,124
Ice	--	2,390
Gasoline	--	2,319
Distillate fuel oil	--	7,300
Residual fuel oil	9,699	954,258
Sugar	22,085	21,458
Sand, gravel, crushed rock	--	13,808
Fertilizer and fertilizer materials	4,360	1,370
Fabricated metal products	300	1,767
Machinery, except electrical	5,888	7,881
Electrical machinery and equipment	800	1,770
Miscellaneous	26,452	4,113
GRAND TOTAL	69,584	1,034,371

BLACK WARRIOR, WARRIOR AND TOMBIGBEE RIVER SYSTEM

SECTION: From mouth of Chickasaw Creek to mile 427 on Mulberry Fork, mile 427.6 on Sipsey Fork, and mile 407 on Locust Fork of the Black Warrior River

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,101,223	3,728,750,287
1974	15,548,253	4,247,424,309
1975	12,797,822	3,267,425,580
1976	14,705,635	4,403,614,065
1977	15,287,119	4,531,485,349
1978	14,600,815	3,971,917,496
1979	15,311,328	4,403,501,022
1980	16,708,082	5,175,059,109
1981	15,962,211	4,962,101,308
1982	15,159,692	4,482,843,891

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Coastwise (Net Tons)	Inland Waterway (Net Tons)
Grain and grain products	--	77,299
Soybeans	--	148,304
Marine shells, unmanufactured	--	16,950
Ores and concentrates	--	326,288
Coal and lignite	--	10,292,896
Crude petroleum	--	658,093
Limestone	--	1,193,919
Sand, gravel, crushed rock	--	736,471
Clay	--	38,539
Nonmetallic minerals, n.e.c.	--	103,790
Logs	--	46,055
Pulpwood, log	--	150,926
Wood chips, staves, moldings	--	96,455
Sodium hydroxide	9,785	160,921
Alcohols	--	12,501
Crude tar, oil, gas products	--	3,360
Basic chemicals and products, n.e.c.	--	61,249
Fertilizers and fertilizer materials	--	40,852
Building Cement	--	265,325
Distillate fuel oil	2,806	37,339
Residual fuel oil	--	339,535
Lubricating oils and greases	--	6,978
Naphtha, petroleum solvents	--	12,197
Asphalt, tar and pitches	--	50,942
Coke, Petroleum coke	--	53,574
Iron and steel products	--	105,313
Pig iron	--	3,740
Fabricated metal products	--	7,584
Ferroalloys	--	12,196
Iron and steel scrap	--	74,384
Miscellaneous	700	12,426
GRAND TOTAL	13,291	15,146,401

CALUMET-SAG CHANNEL

SECTION: From junction at Chicago Sanitary and Ship Canal to Blue Island, Illinois - 24 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	6,111,949	135,161,957
1974	6,983,482	155,253,669
1975	7,126,396	157,743,811

(Continued)

Year	Net Tons	Ton-Miles
1976	6,466,901	141,937,480
1977	6,343,439	140,724,724
1978	6,034,231	137,123,896
1979	5,830,427	133,015,697
1980	6,042,097	137,079,097
1981	6,841,966	155,765,423
1982	5,441,831	117,389,268

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons	
	Coastwise and Lakewise	Inland Waterway
Grain and grain products	--	228,781
Soybeans	--	82,364
Iron ore and concentrates	--	44,249
Aluminum ores and concentrates	--	39,301
Manganese ore and concentrates	--	10,081
Nonferrous ores, concentrates, n.e.c.	--	8,180
Crude petroleum	--	35,958
Coal and lignite	--	271,123
Sand, gravel, crushed rock including limestone	--	176,000
Nonmetallic minerals, n.e.c.	--	242,995
Tallow, animal fats and oils	--	100,545
Prepared animal feeds	2,618	76,794
Molasses	--	64,960
Sodium hydroxide	--	52,367
Alcohols	--	24,862
Benzene and toluene	1,669	17,214
Basic chemicals and products, n.e.c.	--	222,694
Fertilizer and fertilizer materials	6,213	247,973
Gasoline	14,708	38,254
Jet fuel	14,769	19,291
Distillate fuel oil	111,710	112,591
Residual fuel oil	105,325	759,766
Lubricating oils and greases	--	82,506
Naphtha, petroleum solvents	--	56,976
Asphalt, tar and pitches	--	10,836
Coke, petroleum coke	--	849,681
Other petroleum products	4,893	1,952
Lime	--	87,036
Slag	--	89,260
Iron and steel products	1,491	688,216
Lead and zinc, unworked	--	10,162
Ferroalloys	--	124,570
Fabricated metal products	--	12,275
Iron and steel scrap	--	216,923
Miscellaneous	--	71,699
GRAND TOTAL	263,396	5,178,435

CHESAPEAKE BAY

SECTION: From Baltimore, Maryland, to the Capes of Virginia - 200 miles

TOTAL ANNUAL DOMESTIC TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,386,658	2,370,548,397
1972	26,211,332	2,369,353,925
1973	29,569,692	2,756,580,316
1974	30,000,983	2,647,719,258
1975	26,820,368	2,312,096,563
1976	26,443,040	2,427,968,892
1977	23,549,560	1,984,596,243
1978	20,966,291	1,616,151,041
1979	20,404,507	1,599,211,051
1980	20,240,716	1,607,168,861
1981	18,377,313	1,601,012,673

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1981

Commodity	Net Tons
Shellfish and marine shells, unmanufactured	730,169
Coal and lignite	1,800,371
Crude petroleum	52,223
Sand, gravel, crushed rock	410,244
Basic chemicals and products, n.e.c.	503,892
Gasoline	1,779,759
Jet fuel	634,750
Kerosene	55,067
Distillate fuel oil	2,445,639
Residual fuel oil	5,185,449
Lubricating oils and greases	116,643
Naphtha, petroleum solvents	38,148
Asphalt, tar and pitches	985,614
Coke, petroleum coke	29,612
Liquefied gases	280
Asphalt building materials	2,417
Petroleum and coal products, n.e.c.	164,108
Building cement	458,982
All other commerce	2,992,946
GRAND TOTAL	18,377,313

COLUMBIA RIVER

SECTION: From the international boundary, south to the mouth of the Snake River, and westerly between Oregon and Washington to the mouth of the Columbia River at the Pacific Ocean - 745 miles (navigation mileage - 340)

CONTROLLING DEPTHS: 4 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,829,472	2,154,224,739
1972	31,341,190	2,688,814,828
1973	34,413,507	3,165,990,692
1974	39,149,042	3,231,365,552
1975	38,121,549	3,194,430,506
1976	41,960,981	3,630,340,960
1977	38,541,767	4,522,164,844
1978	43,724,801	4,266,839,820
1979	47,059,070	4,588,616,135
1980	49,178,984	4,885,377,980
1981	45,865,986	4,813,116,823
1982	41,665,287	4,308,733,751

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	12,080,632	5,447,780	17,528,412
Aluminum ore, concentrates	1,179,916	--	1,179,916
Crude petroleum	249,738	--	249,738
Limestone	49,985	--	49,985
Sand, gravel, crushed rock	140,665	1,192,830	1,333,495
Clay and structural clay products	230,306	--	230,306
Fertilizer and fertilizer materials	236,878	76,468	313,346
Salt	410,196	--	410,196
Vegetables and preparations, n.e.c.	57,923	1,198	59,121
Molasses	35,321	39,142	74,463
Veg. oils, margarine, shortening	71,050	--	71,050
Logs	3,525,774	29,224	3,554,998
Rafted logs	--	4,368,429	4,368,429
Fuel wood, charcoal, wastes	1,577	14,751	16,328
Timber, posts, poles, piling	5,289	558	5,847
Wood chips, staves, moldings	980,003	507,284	1,487,287
Lumber	500,139	13	500,152
Veneer, plywood, worked wood	92,589	11,768	104,357
Pulp	57,274	249,151	306,425

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Paper and paperboard	464,398	--	464,398
Pulp and paper products, n.e.c.	16,965	633,124	650,089
Basic chem. and products, n.e.c.	465,469	15,197	480,666
Gasoline	592,872	608,597	1,201,469
Jet fuel	56,832	16,949	73,781
Distillate fuel oil	740,470	633,555	1,374,025
Residual fuel oil	1,765,015	940,417	2,705,432
Lubricating oils and greases	62,545	--	62,545
Asphalt, tar and pitches	113,449	4,386	117,835
Other petroleum and coal products	89,393	--	89,393
Iron and steel products	336,085	1,515	337,600
Fabricated metal products	36,584	46	36,630
Machinery, except electrical	29,957	638	30,595
Motor vehicles, parts, equipment	302,433	--	302,433
Iron and steel scrap	170,435	--	170,435
Waste and scrap, n.e.c.	--	819,832	819,832
Miscellaneous	828,912	75,366	904,278
GRAND TOTAL	25,977,069	15,688,218	41,665,287

CUMBERLAND RIVER

SECTION: From the mouth near Smithland, Kentucky, at its junction with the Ohio River, to Celina, Tennessee, mile 381, present head of through navigation

CONTROLLING DEPTHS: 8 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,792,355	677,311,139
1972	8,251,271	882,020,973
1973	10,813,213	1,054,753,548
1974	11,034,025	982,502,698
1975	11,860,145	1,098,589,441
1976	11,318,873	1,085,375,760
1977	12,761,169	1,125,392,878
1978	12,396,898	989,424,876
1979	15,162,573	1,212,783,090
1980	12,348,920	1,030,866,982
1981	10,441,004	934,864,597
1982	11,393,161	1,013,070,728

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	136,802
Soybeans	165,080
Coal and lignite	6,119,087
Ores and concentrates	23,068
Nonmetallic minerals, n.e.c.	2,547,688
Sugar	12,782
Crude tar, oil, gas products	6,981
Alcohols	13,107
Sulphuric acid	20,821
Basic chemicals and products, n.e.c.	172,668
Gasoline	29,259
Distillate fuel oil	131,310
Residual fuel oil	40,940
Asphalt, tar and pitches	98,496
Coke, petroleum coke	43,595
Building cement	400,138
Lime	52,943
Slag	19,921
Iron and steel products	172,116
Fabricated metal products	16,872
Machinery, except electrical	10,821
Iron and steel scrap	43,667
Waterway improvement material	1,095,449
Miscellaneous	19,550
GRAND TOTAL	11,393,161

DELAWARE RIVER

SECTION: From Trenton, New Jersey, to Deepwater Point at mouth of Delaware Bay - 127 miles

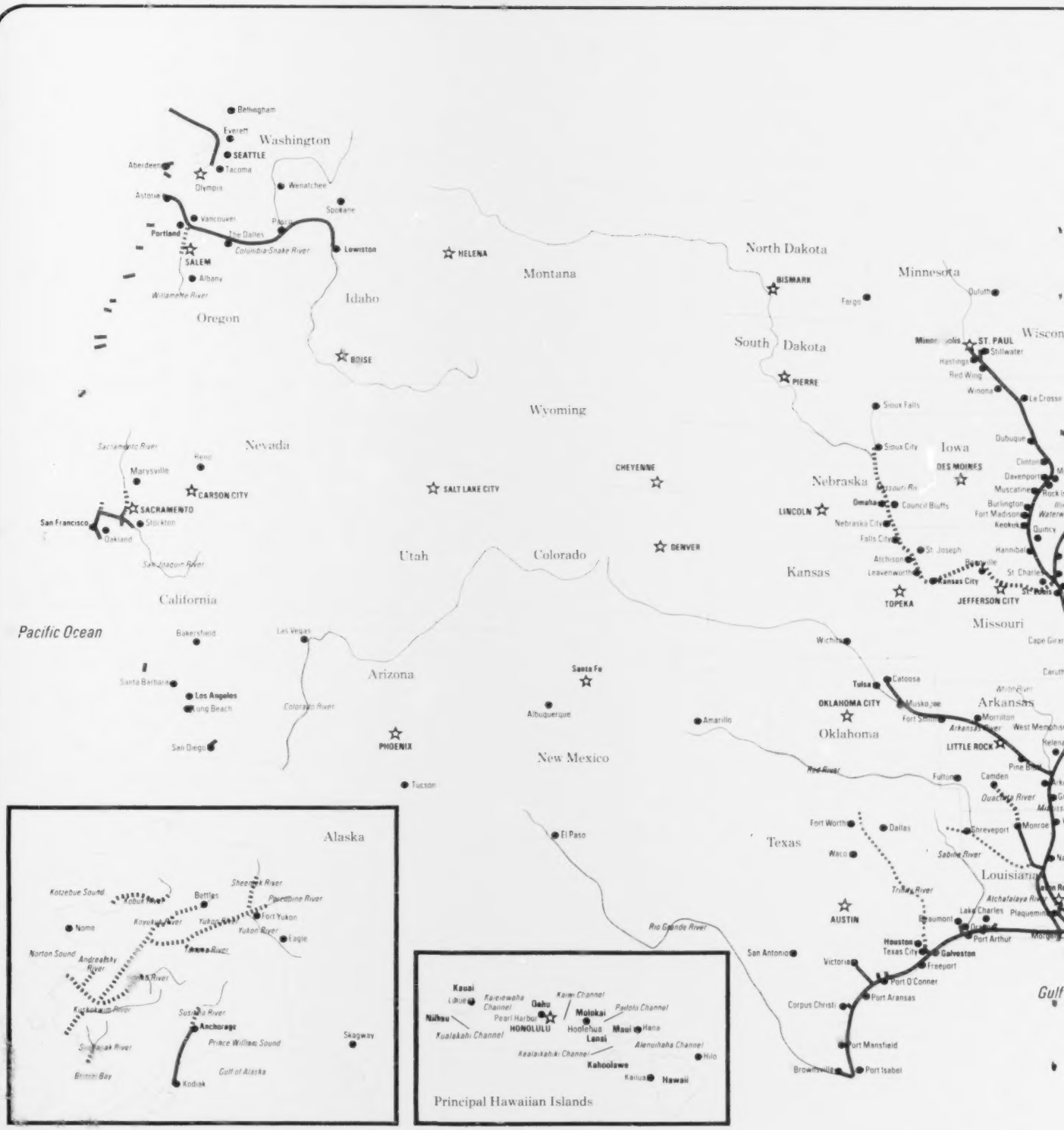
CONTROLLING DEPTHS: 11.6 to 39 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	123,543,497	9,793,833,154
1972	127,207,307	9,635,344,851
1973	139,297,118	10,744,205,966
1974	143,673,501	11,437,006,814
1975	131,819,164	10,446,605,935
1976	133,696,091	10,431,934,520
1977	133,276,227	10,215,907,280
1978	132,438,907	10,234,279,723
1979	140,463,460	10,853,421,444
1980	119,309,114	9,307,766,529
1981	111,896,194	8,733,724,335
1982	98,283,826	7,203,339,886

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	2,411,950	--	2,411,950
Soybeans	509,003	--	509,003
Fresh fruit including bananas	138,088	--	138,088
Cocoa beans	73,805	--	73,805
Iron ore and concentrates	3,834,055	--	3,834,055
Aluminum ores and concentrates	25,855	--	25,855
Nonferrous ores, concentrates, n.e.c.	81,972	10,632	92,604
Coal and lignite	2,077,359	1,130,020	3,207,379
Crude petroleum	42,982,343	6,114,830	49,097,173
Limestone	702,428	--	702,428
Sand, gravel, crushed rock	6,466	64,226	70,692
Clay and structural clay products	68,234	--	68,234
Fertilizer and fertilizer materials	69,657	25,627	95,284
Nonmetallic minerals and salt, n.e.c.	164,472	--	164,472
Meat, fresh, chilled, frozen	309,509	--	309,509
Sugar	148,441	--	148,441
Misc. food products	160,969	17,655	178,624
Basic textile products	14,793	4,729	19,522
Lumber	160,013	--	160,013
Veneer, plywood, worked wood	103,941	--	103,941
Pulp	12,151	94,994	107,145
Paper and paperboard	99,021	2,633	101,654
Sodium hydroxide	155,732	1,157	156,889
Crude tar, oil, gas products	6,942	2,068	9,010
Alcohols	61,499	--	61,499
Benzene and toluene	76,660	77,355	154,015
Sulphuric acid	27,756	223,700	251,456
Basic chemicals and products, n.e.c.	673,401	144,152	817,553
Plastic materials	34,872	--	34,872
Misc. chemical products	63,401	--	63,401
Gasoline	5,894,686	1,286,884	7,181,570
Jet fuel	385,678	410,375	796,053
Kerosene	98,152	71,848	170,000
Distillate fuel oil	3,669,656	2,692,293	6,361,949
Residual fuel oil	7,979,006	5,919,853	13,898,859
Lubricating oils and greases	1,727,602	51,518	1,779,120
Naphtha, petroleum solvents	214,166	99,750	313,916
Asphalt, tar and pitches	742,805	276,205	1,019,010
Other petroleum and coal products	384,600	53,224	437,824
Glass and glass products	16,125	1	16,126
Building cement	253,632	--	253,632
Iron and steel products	763,576	67,807	831,383
Lead and zinc, unworked	41,430	--	41,430
Fabricated metal products	51,169	728	51,897



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Waterways of the United States

CONTROLLING DEPTHS

9 FEET OR MORE

UNDER 9 FEET

AUTHORIZED EXTENSIONS

PUBLISHED 1981 BY
THE AMERICAN WATERWAYS OPERATORS, INC.
1600 WILSON BOULEVARD • SUITE 1000
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CORPS OF ENGINEERS, U.S. ARMY

NAVIGABLE LENGTHS AND DEPTHS[1] OF UNITED STATES WATERWAY ROUTES

GROUP	LENGTH IN MILES OF WATERWAYS: UNDER 6 FT.	6 TO 9FT.	9TO 12 FT.	12 TO 14 FT.	14 FT AND OVER	TOTAL
Atlantic Coast Waterways (exclusive of Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.), but including New York State Barge Canal System	**1,426** 1,487	**1,241** 1,445	**584** 589	**938** 965	**1,581** 1,544	**5,768** 6,030
Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.	**–** –	**65** 160	**65** 65	**1,104** 1,104	**–** –	**1,234** 1,329
Gulf Coast Waterways (exclusive of Gulf Intracoastal Waterway from St. Marks River, Fla. to Mexican Border)	**2,055** 2,174	**647** 812	**1,135** 2,095	**79** 269	**378** 388	**4,292** 5,738
Gulf Intracoastal Waterway from St. Marks River, Fla. to Mexican Border (including Port Allen-Morgan City Alternate Route)	**–** –	**–** –	**–** –	**1,137** 1,180	**–** –	**1,137** 1,180
Mississippi River System	**2,020** 4,365	**969** 1,457	**4,957** 5,062	**740** 755	**268** 268	**8,954** 11,907
Pacific Coast Waterways	**597** 700	**498** 515	**237** 237	**26** 27	**2,367** 825	**3,825** 2,554
Great Lakes	**45** 100	**89** 148	**–** 14	**8** 8	**348** 369	**490** 639
All Other Waterways (exclusive of Alaska)	**76** 76	**7** 7	**–** –	**1** 1	**7** 7	**91** 91
GRAND TOTAL	**6,352** 8,935	**3,516** 4,544	**6,976** 8,062	**4,033** 4,309	**4,666** 3,368	**25,543** 29,218

[1]The mileages shown in this table in bold type represent the lengths of all navigable channels of the United States including those improved by the Federal Government, other agencies, and those which have not been improved but are usable for commmercial navigation.

The mileages shown in this table in light type represent the lengths authorized for improvement by the Congress of the United States in legislation known as Rivers and Harbors Acts.

The sources for these tabulations are publications of the Corps of Engineers, United States Army.

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Machinery, except electrical	95,288	2,069	97,357
Motor vehicles, parts, equip.	299,326	--	299,326
Iron and steel scrap	426,238	--	426,238
Nonferrous metal scrap	37,813	--	37,813
Commodities, n.e.c.	139,284	157,679	296,963
Miscellaneous	757,143	47,651	804,794
GRAND TOTAL	79,232,163	19,051,663	98,283,826

GREEN AND BARREN RIVERS

SECTION: Green River - From near Evansville, Indiana, at the Green River's confluence with the Ohio River, to mouth of Barren River - 149.5 miles. Barren River - From junction with Green River at Woodbury, Kentucky, to Bowling Green, Kentucky - 30 miles

CONTROLLING DEPTHS: 5 1/2 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	14,610,917	1,348,165,401
1972	16,245,729	1,467,228,335
1973	15,517,337	1,395,537,021
1974	15,639,721	1,426,247,039
1975	15,893,645	1,439,134,454
1976	13,781,231	1,203,359,390
1977	13,501,167	1,154,759,525
1978	10,080,475	812,870,554
1979	10,806,466	856,038,878
1980	9,983,135	752,427,710
1981	10,580,607	768,587,006
1982	10,198,991	764,849,431

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain	167,193
Soybeans	123,621
Coal and lignite	9,601,474
Basic chemicals and products, n.e.c.	270,019
Coke, petroleum coke	32,712
Miscellaneous	3,972
GRAND TOTAL	10,198,991

GULF INTRACOASTAL WATERWAY

SECTION: From Apalachee Bay (St. Marks), Florida, to Brownsville, Texas - 1108.9 miles

Alternate Route: Morgan City, Louisiana, to Port Allen, Louisiana - 64.1 miles

CONTROLLING DEPTH: 10 to 12 feet

TOTAL ANNUAL TRAFFIC

	Main Route		Alternate Route	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	105,975,450	17,767,478,670	14,368,939	854,221,099
1972	108,999,010	17,879,308,331	19,173,890	1,156,297,016
1973	100,767,257	16,578,104,685	14,269,832	871,055,019
1974	103,076,142	17,078,855,710	15,895,856	970,581,229
1975	96,950,849	15,594,606,116	17,083,459	1,049,516,733
1976	99,085,379	16,511,685,908	18,961,414	1,160,488,912
1977	104,934,179	18,227,332,044	18,456,491	1,131,951,427
1978	102,332,582	17,506,122,885	18,066,503	1,059,821,031
1979	97,272,038	17,286,322,092	20,254,735	1,258,236,102
1980	94,512,197	16,512,229,005	19,066,976	1,176,261,961
1981	91,576,715	16,248,290,337	18,083,914	1,115,101,862
1982	82,980,463	15,015,218,769	17,833,864	1,096,379,118

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

	Net Tons		
Commodity	Oceangoing	Inland Waterway	Alternate Route
Grain and grain products	3,850	512,945	128,884
Soybeans	--	368,944	33,727
Marine shells, unmanufactured	--	3,911,930	59,750
Iron ore and concentrates	--	48,907	31,749
Aluminum ore, concentrates	--	57,908	6,217
Manganese ores and concentrates	--	26,906	11,095
Coal and lignite	--	4,006,175	152,827
Crude petroleum	--	15,583,924	1,153,988
Limestone	--	33,079	18,703
Sand, gravel, crushed rock	--	1,785,837	18,877
Clay and structural clay products	--	411,482	19,298
Sulphur, liquid	--	481,838	48,725
Animal feeds	11,729	102,353	44,685
Nonmetallic minerals including salt, n.e.c.	24,315	3,956,829	2,414,552
Sugar	14,760	112,933	72,862
Molasses	--	47,915	33,661
Tallow, animal oils and fats, n.e.c.	--	74,931	5,387
Miscellaneous food products	--	110,209	1,128

(Continued)

Commodity	Oceangoing	Net Tons Inland Waterway	Alternate Route
Pulpwood, log	--	78,061	--
Lumber, veneer, plywood, worked wood	--	26,198	--
Paper and paperboard	--	89,905	1,220
Sodium hydroxide	126,113	1,067,411	297,626
Crude tar, oil, gas products	--	550,990	170,939
Alcohols	5,385	1,331,224	669,809
Benzene and toluene	--	1,467,581	375,107
Sulphuric acid	--	485,643	44,829
Basic chemicals and products, n.e.c.	20,047	7,378,020	3,888,755
Plastic materials	--	80,089	--
Synthetic rubber	--	66,616	--
Fertilizer and fertilizer materials	203,070	1,372,305	552,654
Miscellaneous chemical products	--	66,163	50,557
Gasoline	394,440	7,325,367	1,418,783
Jet fuel	16,441	1,631,930	594,544
Kerosene	--	227,697	14,959
Distillate fuel oil	143,195	4,424,391	585,435
Residual fuel oil	40,042	11,345,648	1,357,177
Lubricating oils and greases	--	1,154,576	687,031
Naphtha, petroleum solvents	--	1,735,620	556,282
Asphalt, tar and pitches	--	552,430	120,165
Coke, petroleum coke	--	972,335	330,739
Liquefied gases	44,405	702,679	121,025
Other petroleum and coal products	--	630,994	72,291
Building cement	--	894,967	258,357
Misc. nonmetallic mineral products	695	80,136	--
Slag	--	89,715	89,715
Iron and steel products	3,956	1,238,076	524,079
Ferroalloys	--	62,872	19,769
Lime	--	38,869	35,075
Fabricated metal products	300	60,999	12,103
Machinery, except electrical	8,125	86,448	4,349
Miscellaneous manufactured products	--	211,977	721
Iron and steel scrap	1,327	759,179	506,046
Waste and scrap, n.e.c.	17,053	1,118,717	102,753
Waterway improvement materials	--	23,750	49,970
Miscellaneous	5,069	816,347	64,885
GRAND TOTAL - Tons	1,099,493	81,880,970	17,833,864
GRAND TOTAL - Ton-miles	368,639,621	14,646,579,148	1,096,379,118

HOUSTON SHIP CHANNEL

SECTION: From Galveston Harbor, Texas, through San Jacinto River and Buffalo Bayou to turning basin at Houston, Texas - 52 miles

CONTROLLING DEPTHS: 6 to 37 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	68,423,829	2,865,468,463
1972	71,430,789	2,948,312,107
1973	88,517,992	3,741,921,450
1974	89,106,389	3,767,066,327
1975	83,674,039	3,550,923,871
1976	89,897,598	3,834,608,638
1977	104,291,267	3,285,460,564
1978	111,936,099	4,862,244,510
1979	117,550,908	5,103,845,724
1980	108,937,268	4,651,542,816
1981	100,966,741	4,304,735,941
1982	94,649,549	4,046,104,202

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Cotton	150,096	259
Grain and grain products	11,967,158	112,250
Oilseeds, n.e.c.	24,388	712
Soybeans	1,228,707	5,656
Coffee	78,925	12,692
Marine shells, unmanufactured	--	333,559
Iron ore and concentrates	382,001	34,152
Crude petroleum	15,065,004	1,321,585
Limestone	188,869	80,033
Sand, gravel, crushed rock	24,313	850,124
Clay and structural clay products	1,187,131	2,211
Sulphur, dry and liquid	94,407	210,765
Nonmetallic minerals, n.e.c.	48,151	4,700
Tallow, animal fats and oils	447,408	12,885
Animal by-products, n.e.c.	70,456	--
Molasses	251,308	22,036
Vegetable oils, margarine, shortening	276,965	550
Sodium hydroxide	182,652	410,164
Crude tar, oil, gas products	334,845	437,615
Alcohols	242,241	1,034,406
Benzene and toluene	127,698	948,864
Sulphuric acid	1,889	554,963
Basic chemicals and products, n.e.c	4,560,614	3,435,335

(Continued)

Commodity	Oceangoing	Inland Waterway
Plastic materials	974,035	7,516
Synthetic rubber	71,682	4,815
Fertilizer and fertilizer materials	1,932,985	594,748
Miscellaneous chemical products	601,556	31,328
Gasoline	2,242,624	3,032,440
Jet fuel	528,409	729,916
Kerosene	154,569	106,776
Distillate fuel oil	2,931,518	2,003,253
Residual fuel oil	7,063,662	7,718,317
Lubricating oils and greases	1,929,226	572,858
Naphtha, petroleum solvents	760,104	934,192
Asphalt, tar, and pitches	70,266	199,327
Coke, petroleum coke	141,345	121,681
Liquefied gases	1,286,639	274,355
Other petroleum and coal products	57,696	438,575
Building cement	6,147	94,491
Iron and steel products	4,676,937	818,204
Fabricated metal products	226,838	11,369
Machinery, except electrical	638,765	40,660
Motor vehicles, parts, equipment	341,914	2,231
Iron and steel scrap	128,536	215,050
Waste and scrap, n.e.c.	1,456	1,187,262
Commodities, n.e.c.	357,661	88,568
Miscellaneous	1,300,493	235,812
GRAND TOTAL	65,360,289	29,289,260

HUDSON RIVER

SECTION: From deepwater in Upper Bay, New York, to Waterford, New York - 155 miles

CONTROLLING DEPTHS: 12 to 27 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	40,952,909	2,461,659,464
1974	38,479,579	2,260,669,818
1975	34,135,648	1,959,202,309
1976	28,308,347	1,923,483,312
1977	28,220,192	1,939,792,560
1978	30,080,559	2,035,919,276
1979	28,519,840	1,904,117,775
1980	27,383,819	1,824,844,569
1981	21,014,511	1,354,359,053
1982	20,543,867	1,278,238,346

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons Oceangoing	Net Tons Inland Waterways	Total
Grain and grain products	295,556	--	295,556
Fresh fruit including bananas	65,583	--	65,583
Coffee	14,094	76,020	90,114
Crude petroleum	37,406	--	37,406
Limestone	1,050,436	--	1,050,436
Sand, gravel and crushed rock	891,713	2,991,886	3,883,599
Sugar	375,053	--	375,053
Molasses	29,362	--	29,362
Alcoholic beverages	121,028	--	121,028
Veg. oils, margarine, shortening	8,518	14,079	22,597
Sodium hydroxide	--	8,374	8,374
Basic chemicals and products, n.e.c.	54,403	--	54,403
Plastic materials	50,451	--	50,451
Gasoline	363,015	3,185,831	3,548,846
Jet fuel	43,715	166,800	210,515
Kerosene	29,918	156,617	186,535
Distillate fuel oil	309,243	2,360,422	2,669,665
Residual fuel oil	1,252,205	3,010,336	4,262,541
Asphalt, tar and pitches	64,540	114,276	178,816
Other petroleum and coal products	147,145	19,178	166,323
Building cement	1,154,908	327,696	1,482,604
Iron and steel products	42,722	--	42,722
Fabricated metal products	54,813	--	54,813
Machinery, except electrical	56,892	--	56,892
Electrical machinery and equipment	48,547	--	48,547
Motor vehicles, parts and equipment	51,577	--	41,577
Iron and steel scrap	61,244	32,209	93,453
Waste and scrap, n.e.c.	81,845	647,747	729,592
Miscellaneous	673,049	3,415	676,464
GRAND TOTAL	7,428,981	13,114,886	20,543,867

ILLINOIS WATERWAY

SECTION: From Illinois River at Grafton, Illinois, to Turning Basin No. 5 on Calumet River (includes Calumet-Sag Channel) - 353.6 miles

CONTROLLING DEPTHS: 9 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	38,324,867	7,312,185,374
1972	43,970,391	8,350,419,627
1973	44,510,478	8,450,727,892
1974	45,301,607	8,825,841,497
1975	47,242,597	8,992,017,443
1976	46,853,608	8,988,507,803

(Continued)

Year	Net Tons	Ton-Miles
1977	44,516,298	8,518,085,320
1978	41,609,086	7,683,852,338
1979	39,339,385	7,462,048,381
1980	45,526,962	8,798,705,441
1981	43,111,132	8,554,222,938
1982	42,719,065	8,220,463,440

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons: Coastwise and Lakewise	Net Tons: Inland Waterway
Grain and grain products	--	15,037,428
Soybeans	--	3,755,118
Prepared animal feeds	3,921	949,556
Ores and concentrates	--	109,980
Coal and lignite	--	4,434,252
Crude petroleum	--	361,299
Sand, gravel, crushed rock	--	3,149,682
Fertilizer and fertilizer materials	7,586	744,665
Sulphur, liquid	--	58,128
Nonmetallic minerals, n.e.c.	--	980,487
Tallow, animal fats and oils	--	113,160
Sugar	--	160,248
Molasses	--	83,489
Vegetable oils, margarine, shortenings	--	39,869
Pulp	--	34,060
Sodium hydroxide	--	261,175
Crude tar, oil, gas products	--	75,964
Alcohols	--	251,915
Benzene and toluene	1,669	72,969
Sulphuric acid	--	77,462
Basic chemicals and products	238,534	1,398,450
Gasoline	57,725	658,802
Jet fuel	88,079	73,153
Distillate fuel oil	227,026	883,100
Residual fuel oil	460,408	1,715,608
Lubricating oils and greases	--	307,287
Naphtha, petroleum solvents	--	315,474
Asphalt, tar and pitches	74,896	360,537
Coke and petroleum coke	--	1,351,027
Other petroleum and coal products	7,692	57,374
Building cement	--	558,675
Lime	--	146,105
Slag	--	95,205
Iron and steel products	1,491	896,729
Ferroalloys	--	124,937
Fabricated metal products	--	16,491
Iron and steel scrap	--	514,794
Waste and scrap, n.e.c.	--	1,193,552
Miscellaneous	--	131,832
GRAND TOTAL	1,169,027	41,550,038

JAMES RIVER

SECTION: From Richmond, Virginia, to Hampton Roads at Newport News, Virginia - 89 miles

CONTROLLING DEPTHS: 11 to 25 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1970	7,301,413	435,709,182
1971	8,551,305	526,683,591
1972	6,554,555	408,542,427
1973	7,805,992	482,358,804
1974	7,714,515	471,973,029
1975	5,566,000	361,115,892
1976	6,192,395	396,102,080
1977	6,714,097	412,434,993
1978	7,819,573	457,071,325
1979	7,918,482	481,495,348
1980	7,853,114	468,944,980
1981	6,342,269	386,064,335
1982	6,070,085	379,971,302

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Tobacco, leaf	52,264	--	52,264
Marine shells, unmanufactured	--	5,842	5,842
Sand, gravel, crushed rock	1,983	4,530,543	4,532,526
Sulphur, liquid	71,958	--	71,958
Sulphuric acid	3,055	39,940	42,995
Basic chemicals and products, n.e.c.	57,172	83,614	140,786
Fertilizer and materials, n.e.c.	--	6,000	6,000
Nitrogenous chemical fertilizers	331,128	134,501	465,629
Gasoline	--	49,394	49,394
Distillate fuel oil	--	146,156	146,156
Residual fuel oil	--	295,683	295,683
Asphalt, tar and pitches	64,961	68,174	133,135
Petroleum and coal products, n.e.c.	330	2,536	2,866
Iron and steel scrap	16,004	--	16,004
Miscellaneous	108,302	545	108,847
GRAND TOTAL	707,157	5,362,383	6,070,085

KANAWHA RIVER

SECTION: Deepwater, West Virginia, to the Kanawha River's confluence with the Ohio River at Point Pleasant, West Virginia - 91 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,169,337	796,234,247
1974	12,781,026	713,681,050
1975	12,449,424	657,277,327
1976	12,250,362	662,228,354
1977	10,755,599	562,178,431
1978	10,992,616	601,519,584
1979	13,776,446	783,939,496
1980	14,673,829	872,622,577
1981	12,993,994	723,854,233
1982	13,726,898	845,505,324

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Coal and lignite	9,135,047
Limestone	133,957
Sand, gravel, crushed rock	1,944,069
Nonmetallic minerals, n.e.c.	135,871
Sodium hydroxide	51,011
Alcohols	255,092
Benzene and toluene	19,079
Sulphuric acid	7,200
Basic chemicals and products, n.e.c.	1,025,686
Miscellaneous chemical products	83,930
Gasoline	469,975
Jet fuel	4,561
Kerosene	32,787
Distillate fuel oil	189,792
Residual fuel oil	18,967
Lubricating oils and greases	8,585
Naphtha, petroleum solvents	54,843
Coke, petroleum coke	3,234
Building cement	65,476
Slag	36,268
Iron and steel scrap	33,367
Miscellaneous	18,101
GRAND TOTAL	13,726,898

KASKASKIA RIVER

SECTION: Mouth at Mississippi River to mile 36.2 at Fayetteville, Illinois

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	25,236	--
1974	216,268	--
1975	194,750	--
1976	589,508	14,147,950
1977	1,286,808	31,788,700
1978	1,832,961	42,431,625
1979	1,723,453	42,918,325
1980	2,045,575	51,094,375
1981	2,704,632	67,575,300
1982	3,188,393	79,951,451

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Coal and lignite	3,130,917
Miscellaneous	57,476
GRAND TOTAL	3,188,393

KENTUCKY RIVER

SECTION: From Carrollton, Kentucky, at the Kentucky River's confluence with the Ohio River, south to the junction of the North and Middle Forks east of Beattyville, Kentucky - 255 miles

CONTROLLING DEPTH: 6 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	777,894	52,282,252
1974	652,607	43,237,662
1975	580,481	39,416,325
1976	538,712	35,554,992
1977	465,116	30,266,386
1978	415,521	25,534,459
1979	417,947	26,883,350
1980	292,276	19,057,722
1981	231,687	14,895,158
1982	173,366	11,268,790

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Sand, gravel, crushed rock and limestone	173,366
GRAND TOTAL	173,366

McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

SECTION: From confluence of White and Mississippi Rivers to Catoosa, Oklahoma, via White River, Arkansas Post Canal, Arkansas, and Verdigris Rivers - 448 miles

CONTROLLING DEPTH: Minimum - 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1972	5,337,370	520,887,271
1973	4,955,789	338,623,935
1974	6,000,443	451,108,827
1975	5,156,562	430,977,451
1976	6,538,434	778,259,780
1977	9,145,956	1,297,556,979
1978	9,851,932	1,694,929,503
1979	8,411,173	1,472,861,443
1980	8,461,411	1,819,076,183
1981	7,674,431	1,861,629,275
1982	7,823,228	1,798,718,548

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	1,459,465
Soybeans	573,935
Ores and concentrates	90,974
Coal and lignite	922,527
Sand, gravel, crushed rock including limestone	1,532,405
Fertilizer and fertilizer materials	376,364
Prepared animal feeds	147,754
Molasses	4,268
Veneer, plywood, worked wood	32,863
Paper and paperboard	88,522
Pulp, paper products, n.e.c.	113,738
Sodium hydroxide	143,840
Alcohols	17,9?6
Basic chemicals and products, n.e.c.	129,313
Gasoline	142,450

(Continued)

Commodity	Net Tons
Distillate fuel oil	19,852
Residual fuel oil	1,030,270
Asphalt, tar and pitches	96,170
Other petroleum and coal products	187,064
Slag	33,054
Iron and steel products	334,416
Fabricated metal products	24,856
Iron and steel scrap	23,867
Waterway improvement materials	153,862
Miscellaneous	143,463
GRAND TOTAL	7,823,228

MINNESOTA RIVER

SECTION: Mouth to Shakopee, Minnesota - 25.6 miles

CONTROLLING DEPTH: 9 feet to mile 14.7

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,626,132	--
1972	4,314,833	--
1973	4,284,012	--
1974	4,778,630	--
1975	3,842,850	--
1976	3,898,291	54,693,553
1977	3,407,261	46,533,312
1978	2,078,067	28,866,981
1979	1,198,086	16,238,965
1980	2,713,844	38,219,169
1981	2,594,806	38,777,634
1982	3,821,648	53,806,323

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	2,279,559
Soybeans	773,534
Coal and lignite	348,935
Nonmetallic minerals, n.e.c.	99,494
Vegetable oils, margarine, shortening	36,583
Fertilizer and fertilizer materials	184,454
Asphalt, tar, and pitches	65,943
Iron and steel products	19,889
Miscellaneous	13,257
GRAND TOTAL	3,821,648

UPPER MISSISSIPPI RIVER

SECTION: From Minneapolis, Minnesota, to the mouth of the Missouri River - 663 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterway		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1973	57,818,045	10,873,575,077	246,153	5,626,401
1974	61,747,186	11,700,427,879	266,458	7,122,004
1975	63,080,102	11,293,894,600	158,565	8,620,861
1976	68,276,914	11,688,260,904	143,393	8,289,820
1977	67,020,864	11,380,455,846	197,278	13,848,016
1978	68,816,214	12,908,444,194	160,167	12,562,943
1979	68,506,059	13,269,369,817	108,603	2,497,869
1980	76,308,307	15,155,731,244	86,572	1,991,156
1981	74,504,507	15,828,795,803	27,041	770,503
1982	74,655,537	14,630,244,936	5,294	121,762

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Net Tons

Commodity	Oceangoing	Inland Waterway
Grain and grain products	--	31,889,267
Soybeans	--	9,328,959
Oilseeds, n.e.c.	--	39,370
Ores, concentrates, n.e.c.	--	191,086
Coal and lignite	--	7,804,042
Crude petroleum	--	760,695
Limestone	--	76,996
Sand, gravel, crushed rock	--	1,915,466
Sulphur, liquid	--	58,128
Nonmetallic minerals, n.e.c.	--	1,453,956
Tallow, animal fats and oils	--	119,106
Prepared animal feeds	3,921	1,996,014
Sugar	--	165,991
Molasses	--	185,994
Vegetable oils, margarine, shortening	--	376,797
Sodium hydroxide	--	335,999
Crude tar, oil, gas products	--	68,446
Alcohols	--	257,513
Benzene and toluene	--	193,541
Sulphuric acid	--	65,565
Basic chemicals and products, n.e.c.	--	1,903,459
Fertilizer and fertilizer materials	1,373	2,075,861

(Continued)

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway
Gasoline	--	2,460,841
Jet fuel	--	170,388
Distillate fuel oil	--	1,252,878
Residual fuel oil	--	2,305,639
Lubricating oils and greases	--	391,884
Naphtha, petroleum solvents	--	338,930
Asphalt, tar and pitches	--	1,318,509
Coke, petroleum coke	--	1,089,181
Other petroleum and coal products	--	80,949
Building cement	--	1,452,578
Lime	--	144,655
Slag	--	220,489
Iron and steel products	--	945,657
Ferroalloys	--	133,203
Fabricated metal products	--	15,584
Machinery, except electrical	--	9,401
Iron and steel scrap	--	532,849
Waterway improvement material	--	282,271
Miscellaneous	--	247,400
GRAND TOTAL	5,294	74,655,537

MISSISSIPPI RIVER

(CONSOLIDATED)

SECTION: From Minneapolis, Minnesota, to the Mouth of Passes - 1,837 miles

CONTROLLING DEPTH: 9 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons Oceangoing	Net Tons Inland Waterway	Net Tons Total
1972	93,174,371	178,806,043	271,980,414
1973	102,345,760	174,001,136	276,346,896
1974	112,754,958	189,834,656	302,589,614
1975	123,325,607	187,913,877	311,239,484
1976	152,855,495	203,328,232	356,183,727
1977	185,282,919	211,488,297	396,771,216
1978	197,563,541	215,502,119	413,065,660
1979	212,169,751	218,000,928	430,170,679
1980	218,642,927	222,901,151	441,544,078
1981	223,106,944	223,275,410	446,382,354
1982	192,171,238	215,427,418	407,598,656

(Continued)

Year	Oceangoing	Inland Waterway	Total
	Ton-Miles		
1972	14,021,094,636	93,455,455,377	107,476,550,013
1973	15,478,890,445	91,479,128,715	106,958,019,160
1974	17,328,836,147	99,883,317,438	117,212,153,585
1975	19,401,952,194	99,715,863,367	119,117,815,561
1976	24,656,411,741	110,565,437,157	135,220,848,898
1977	29,911,859,876	109,554,793,105	139,466,652,981
1978	32,324,017,168	118,165,016,318	150,489,033,486
1979	34,339,939,056	120,669,619,515	155,009,558,571
1980	35,438,232,484	133,294,646,187	168,732,878,671
1981	35,376,253,160	138,972,272,151	174,348,525,311
1982	30,100,353,275	131,592,212,389	161,692,565,664

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Oceangoing	Inland Waterway	Total
	Net Tons		
Grain and grain products	47,002,534	51,960,501	98,963,035
Soybeans	19,407,425	18,990,646	38,398,071
Oilseeds, n.e.c.	54,307	66,068	120,375
Coffee	208,180	18,447	226,627
Marine shells, unmanufactured	--	1,678,249	1,678,249
Crude rubber and allied gums	173,371	--	173,371
Iron ores and concentrates	454,987	373,588	828,575
Aluminum ores and concentrates	3,813,502	217,207	4,030,709
Manganese ores and concentrates	115,180	130,069	245,249
Nonferrous ores, concentrates, n.e.c.	284,116	349,241	633,357
Coal and lignite	10,048,354	31,027,710	41,076,064
Crude petroleum	48,771,784	12,618,970	61,390,754
Limestone	306,055	352,315	658,370
Sand, gravel, crushed rock	7,359	4,463,716	4,471,075
Clay and structural clay products	805,483	404,480	1,209,963
Sulphur, dry and liquid	1,542,996	1,249,677	2,792,673
Nonmetallic minerals, n.e.c.	513,167	4,380,228	4,893,395
Tallow, animal fats and oils	586,148	278,407	864,555
Prepared animal feeds	10,918,487	4,537,524	15,456,011
Sugar	635,135	412,003	1,047,138
Molasses	251,915	371,038	622,953
Veg. oils, margarine, shortening	1,164,235	947,114	2,111,349
Logs	26,921	169,036	195,957
Lumber	39,175	31,885	71,060
Veneer, plywood, worked wood	167,214	137,115	304,329
Pulp	433,522	207,761	641,283
Paper and paperboard	551,732	310,220	861,952
Sodium hydroxide	378,512	1,715,671	2,094,183

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Crude tar, oil, gas products	7,944	520,105	528,049
Alcohols	253,584	1,382,758	1,636,342
Benzene and toluene	27,423	1,115,515	1,142,938
Sulphuric acid	--	536,583	536,583
Basic chemicals & products, n.e.c.	3,197,854	9,942,182	13,140,036
Plastic materials	113,215	6,884	120,099
Synthetic rubber	15,179	75,117	90,296
Fertilizer & fertilizer materials	5,417,163	6,010,761	11,427,924
Miscellaneous chemical products	164,648	144,185	308,833
Gasoline	4,557,192	9,879,934	14,437,126
Jet fuel	751,432	1,623,071	2,374,503
Kerosene	119,860	228,937	348,797
Distillate fuel oil	4,108,532	6,578,633	10,687,165
Residual fuel oil	15,154,777	15,851,181	31,005,958
Lubricating oils & greases	3,055,823	1,498,027	4,553,850
Naphtha, petroleum solvents	225,242	1,616,917	1,842,159
Asphalt, tar and pitches	164,376	2,127,559	2,291,935
Coke, petroleum coke	1,863,913	2,936,276	4,800,189
Liquefied gases	188,012	953,344	1,141,356
Other petroleum & coal products	223,678	277,479	501,157
Building cement	7,167	3,206,039	3,213,206
Lime	1,297	423,877	425,174
Slag	--	362,791	362,791
Iron and steel products	1,885,000	2,596,623	4,481,623
Copper alloys, unworked	61,253	21,488	82,741
Ferroalloys	376,883	471,236	848,119
Lead & zinc, unworked	95,996	78,032	174,028
Aluminum & alloys, unworked	242,366	133,720	376,086
Fabricated metal products	103,849	146,440	250,289
Machinery, except electrical	182,040	108,417	290,457
Electrical machinery & equipment	55,821	26,018	81,839
Motor vehicles, parts, equipment	20,325	2,541	22,866
Ships and boats	33,655	14,194	47,849
Miscellaneous manufactured products	2,333	163,606	165,939
Iron and steel scrap	166,882	1,235,121	1,402,003
Nonferrous metal scrap	48,987	7,400	56,387
Waste and scrap, n.e.c.	17,053	147,733	164,786
Water	--	355,570	355,570
Waterway improvement materials	--	4,476,837	4,476,837
Miscellaneous	598,688	745,401	1,344,089
GRAND TOTAL	192,171,238	215,427,418	407,598,656

MISSOURI RIVER

SECTION: From Fort Benton, Montana, to the mouth of the Missouri River - 2073.2 miles

CONTROLLING DEPTHS: 7.5 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	7,483,708	1,329,899,221
1972	7,182,841	1,280,384,981
1973	6,370,838	884,405,933
1974	7,673,084	1,227,524,876
1975	6,208,426	1,105,811,014
1976	6,552,949	1,535,911,975
1977	6,734,850	1,596,283,935
1978	7,929,184	1,528,614,096
1979	7,684,738	1,518,549,496
1980	5,914,775	1,335,308,949
1981	5,251,952	1,130,787,035
1982	4,880,527	1,131,248,985

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	799,724
Soybeans	407,806
Coal and lignite	39,144
Sand, gravel, crushed rock	2,257,226
Nonmetallic minerals, n.e.c.	93,269
Tallow, animal fats and oils	28,892
Animal feeds	183,018
Molasses	78,823
Vegetable oils, margarine, shortening	54,748
Sodium hydroxide	14,647
Alcohols	26,115
Gasoline	19,185
Coke, petroleum coke	63,565
Other petroleum and coal products	87,865
Fertilizer and materials	366,716
Building cement	140,237
Iron and steel products	70,287
Waterways improvement materials	110,135
Iron and steel scrap	7,453
Miscellaneous	31,672
GRAND TOTAL	4,800,527

MONONGAHELA RIVER

SECTION: From Pittsburgh, Pennsylvania, at the Monongahela River's confluence with the Ohio and Allegheny Rivers to Fairmont, West Virginia - 129 miles

CONTROLLING DEPTHS: 7 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	35,670,419	1,420,170,445
1972	38,624,403	1,527,938,779
1973	37,592,584	1,494,803,894
1974	38,265,899	1,641,720,394
1975	37,268,425	1,538,912,980
1976	36,489,211	1,519,897,770
1977	34,420,145	1,351,745,761
1978	31,673,799	1,223,814,273
1979	38,222,785	1,590,765,057
1980	34,310,879	1,507,005,929
1981	32,116,533	1,431,023,337
1982	28,819,738	1,491,527,847

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Limestone	531,800
Ores and concentrates	32,640
Crude Petroleum	6,585
Coal and lignite	24,466,718
Sand, gravel, crushed rock	1,382,118
Nonmetallic minerals, n.e.c.	145,357
Crude tar, oil, gas products	59,541
Benzene and toluene	31,958
Sulphuric acid	9,665
Basic chemicals and products, n.e.c.	182,209
Gasoline	499,360
Kerosene	49,664
Distillate fuel oil	427,227
Residual fuel oil	41,222
Asphalt, tar and pitches	140,121
Coke, petroleum coke	105,031
Building cement	31,725
Iron and steel products	393,164
Ferroalloys	41,285
Iron and steel scrap	170,272
Miscellaneous	72,076
GRAND TOTAL	28,819,738

NEW YORK STATE BARGE CANAL

SECTION: From Tonawanda, New York, to Whitehall, New York, including the Erie, Oswego, Cayuga, Seneca, and Champlain Canals - 524 miles

CONTROLLING DEPTHS: 12 to 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	2,548,113	246,839,392
1974	2,222,827	215,430,282
1975	1,940,772	180,725,089
1976	2,227,052	193,092,844
1977	1,826,878	166,635,083
1978	1,553,310	146,240,967
1979	1,303,337	119,115,618
1980	1,148,382	104,825,155
1981	807,925	72,230,178
1982	777,292	65,425,929

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Sand, gravel, crushed rock	78,650
Molasses	10,465
Gasoline	196,782
Jet fuel	122,322
Kerosene	23,061
Distillate fuel oil	91,647
Residual fuel oil	72,861
Asphalt, tar and pitches	118,644
Building cement	62,160
Machinery, except electrical	100
Miscellaneous	600
GRAND TOTAL	777,290

OHIO RIVER

SECTION: From Pittsburgh, Pennsylvania, at junction of Allegheny and Monongahela Rivers, to the Ohio River's confluence with the Mississippi River at Cairo, Illinois - 981 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterways		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	133,335,784	30,896,445,937	28,121	9,038,912
1972	138,848,346	32,055,617,509	29,346	10,849,428
1973	135,724,305	29,925,212,855	36,170	16,984,756
1974	139,258,864	31,929,318,977	35,349	15,765,982
1975	140,038,398	32,313,473,639	19,916	6,940,114
1976	148,394,558	34,358,944,032	23,252	12,704,985
1977	151,372,496	37,453,616,476	30,121	13,815,683
1978	152,558,561	38,823,847,854	12,456	5,790,596
1979	165,311,190	43,396,484,098	9,729	4,678,032
1980	155,890,711	38,704,564,475	16,008	9,287,078
1981	158,683,586	39,596,730,751	35,505	5,348,897
1982	150,696,330	35,614,892,613	27,068	7,370,644

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	1982 Net Tons
Grain and grain products	9,681,777
Soybeans	3,548,718
Iron ores and concentrates	260,132
Aluminum ore, concentrates	29,932
Manganese ores and concentrates	164,730
Nonferrous ores, concentrates, n.e.c.	290,365
Coal and lignite	86,769,157
Crude petroleum	634,294
Limestone	2,075,520
Sand, gravel, crushed rock	12,046,309
Clay and structural clay products	46,034
Nonmetallic minerals, n.e.c.	1,772,257
Prepared animal feeds	860,352
Sugar	51,200
Molasses	22,082
Vegetable oils, margarine, shortening	265,092
Standard newsprint paper	20,613
Paper and paperboard	9,945
Sodium hydroxide	441,459
Crude tar, oil, gas products	417,354
Alcohols	635,209
Benzene and toluene	331,115
Sulphuric acid	87,944
Basic chemicals and products, n.e.c.	5,207,215

(Continued)

Commodity	1982 Net Tons
Fertilizer and fertilizer materials	1,709,714
Miscellaneous chemical products	174,608
Gasoline	6,215,096
Jet fuel	711,417
Kerosene	345,018
Distillate fuel oil	3,415,068
Residual fuel oil	1,987,128
Lubricating oils and greases	832,987
Naphtha, petroleum solvents	265,458
Asphalt, tar and pitches	1,366,008
Coke, petroleum coke	1,085,338
Liquefied gases	13,138
Other petroleum and coal products	23,559
Glass and glass products	10,669
Building cement	1,303,042
Lime	1,138,731
Pig iron	27,525
Slag	285,390
Ferroalloys	364,058
Iron and steel products	1,412,865
Lead and zinc, unworked	14,274
Aluminum and alloys, unworked	155,693
Fabricated metal products	97,644
Machinery, except electrical	51,706
Electrical machinery and equipment	8,413
Ships and boats	12,741
Iron and steel scrap	499,412
Waste and scrap, n.e.c.	31,299
Waterway improvement materials	1,297,236
Miscellaneous	139,558
GRAND TOTAL	150,723,398

OUACHITA-BLACK RIVERS

SECTION: From Camden, Arkansas, on the Ouachita River to the mouth of Black River at the confluence with Red River in Louisiana - 336 miles

CONTROLLING DEPTH: 9 feet to Sterlington, Louisiana (193 miles); 6.5 feet from Sterlington to Camden, Arkansas (143 miles)

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	584,466	55,890,918
1972	839,221	101,949,140
1973	749,836	108,551,284

(Continued)

Year	Net Tons	Ton-Miles
1974	946,439	111,889,529
1975	957,881	117,770,724
1976	1,350,877	151,031,845
1977	1,041,580	135,976,136
1978	1,084,940	126,443,942
1979	1,170,215	148,559,409
1980	814,152	97,406,594
1981	705,763	79,871,816
1982	509,233	49,571,494

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	112,421
Soybeans	175,277
Sugar	17,697
Logs	6,400
Basic chemicals and products. n.e.c.	27,500
Gasoline	13,040
Residual fuel oil	68,591
Other petroleum products	2,018
Miscellaneous	86,289
GRAND TOTAL	509,233

POTOMAC RIVER

SECTION: From mouth to Giesboro Point at Washington, DC - 108 miles (includes Broad Creek, Nanjemoy Creek, Mattox Creek, Chicamuxen Creek, St. Clement Bay and Piscataway Creek).

CONTROLLING DEPTH: 20.5 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	8,639,605	477,296,971
1972	7,659,645	455,533,983
1973	8,074,656	578,515,157
1974	6,633,521	454,974,710
1975	5,205,169	354,303,374
1976	6,037,072	418,064,030
1977	6,476,344	444,774,563
1978	5,427,858	392,993,107
1979	5,204,930	330,586,279
1980	4,292,350	272,325,315
1981	2,894,103	178,223,889
1982	2,418,191	133,473,913

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Fresh fish, except shellfish	--	1,980	1,980
Shellfish, except prepared	--	13,883	13,883
Marine shells, unmanufactured	--	49,186	49,186
Paper and paperboard	125,857	--	125,857
Sand, gravel, crushed rock	--	49,427	49,427
Jet fuel	83,849	420,172	504,021
Distillate fuel oil	--	481,939	481,939
Residual fuel oil	237,893	553,273	791,166
Asphalt, tar and pitches	97,595	206,416	304,011
Miscellaneous	93,254	3,467	96,721
GRAND TOTAL	638,448	1,779,743	2,418,191

SACRAMENTO RIVER

SECTION: From mouth of river to Red Bluff via River route. (Includes commerce of Sacramento River Deepwater Ship Channel and the Port of Sacramento, California) - 248 miles

CONTROLLING DEPTHS: 6 to 29 feet; Port of Sacramento - 29 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	4,920,485	168,137,575
1972	1,770,489	74,453,737
1973	2,044,519	95,705,437
1974	1,485,044	61,407,313
1975	1,788,843	72,719,306
1976	1,756,051	69,809,319
1977	1,602,291	64,389,057
1978	1,760,717	77,941,127
1979	2,065,089	90,088,944
1980	2,964,769	126,155,240
1981	3,118,927	131,527,062
1982	2,016,475	83,744,844

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Rice	511,001	--	511,001
Wheat	363,281	--	363,281

(Continued)

Commodity	Oceangoing	Inland Waterway	Total
Sand, gravel, crushed rock	--	4,680	4,680
Animal feeds	124,948	--	124,948
Paper and paperboard	19,767	--	19,767
Wood chips, staves, moldings	294,001	--	294,001
Fertilizer and fertilizer materials	214,980	--	214,980
Basic chemicals and products, n.e.c.	171,062	--	171,062
Coke, petroleum coke	237,440	--	237,440
Waterway improvement materials	--	62,830	62,830
Miscellaneous	12,485	--	12,485
GRAND TOTAL	1,948,965	67,5102,016,475	

SAN JOAQUIN RIVER

SECTION: From Stockton, California, to the mouth of San Joaquin River at Suisun Bay - 45 miles. From Stockton Channel to Hills Ferry - 84 miles

CONTROLLING DEPTHS: 3 to 30 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	6,839,741	201,473,386
1972	3,025,392	70,315,229
1973	3,706,593	81,336,734
1974	3,722,780	69,014,909
1975	4,124,421	84,296,941
1976	4,643,914	69,770,870
1977	3,507,137	70,881,198
1978	2,638,522	70,260,649
1979	3,104,550	74,480,203
1980	3,920,171	101,568,571
1981	3,883,148	92,243,196
1982	2,759,139	68,312,810

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Cotton, raw	6,967	--	6,967
Wheat	518,483	--	518,483
Coal and lignite	169,584	--	169,584
Limestone	374,081	--	374,081
Forest products, n.e.c.	--	26,000	26,000

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Ores and concentrates	5,672	--	5,672
Sulphur, dry	152,019	--	152,019
Clay and structural clay products	21,969	--	21,969
Salt	--	165,270	165,270
Animal feeds	15,620	--	15,620
Molasses	18,755	--	18,755
Sodium hydroxide	13,500	--	13,500
Basic chemicals and products, n.e.c.	222,787	--	222,787
Fertilizer and fertilizer materials	233,239	--	233,239
Jet fuel	16,999	--	16,999
Residual fuel oil	--	52,674	52,674
Coke, petroleum coke	247,408	--	247,408
Iron and steel products	13,270	--	13,270
Cement	17,637	650	18,287
Iron and steel scrap	25,793	--	25,793
Waterway improvement materials	--	426,564	426,564
Miscellaneous	12,031	2,167	14,198
GRAND TOTAL	2,085,814	673,325	2,759,139

SNAKE RIVER

OREGON, WASHINGTON AND IDAHO

SECTION: Mouth of Snake River to Johnson Bar Landing, Idaho

CONTROLLING DEPTH: 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	975,489	--
1972	1,735,391	--
1973	1,760,946	--
1974	1,729,725	--
1975	2,010,721	--
1976	2,894,606	210,093,845
1977	2,911,249	214,892,369
1978	3,852,302	319,423,288
1979	4,356,735	333,137,838
1980	5,063,613	375,625,088
1981	5,335,162	404,826,460
1982	5,065,328	362,319,798

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain	3,622,926
Logs	21,227
Fuel wood, charcoal, wastes	3,072
Wood chips, staves, moldings	21,324
Pulp and paper products, n.e.c.	35,463
Basic chemicals and products, n.e.c.	10,899
Nitrogenous chemical fertilizers	40,046
Gasoline	252,042
Jet fuel	14,708
Distillate fuel oil	210,881
Residual fuel oil	20,272
Asphalt, tar and pitches	3,917
Waste and scrap, n.e.c.	792,000
Miscellaneous	16,551
GRAND TOTAL	5,065,328

TENNESSEE RIVER

SECTION: From the junction of French and Holston Rivers at Knoxville, Tennessee, to the Tennessee River's confluence with the Ohio River at Paducah, Kentucky - 650 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	27,685,211	3,960,491,547
1972	28,529,732	3,755,867,106
1973	29,346,595	3,928,498,660
1974	27,123,623	3,578,808,825
1975	28,316,539	3,915,824,883
1976	26,254,165	3,663,744,641
1977	26,583,240	3,747,588,855
1978	31,634,492	4,416,600,076
1979	31,398,039	5,061,973,955
1980	29,396,552	5,330,099,702
1981	26,004,615	4,842,190,392
1982	25,513,442	5,101,877,260

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons
Grain and grain products	2,402,059
Soybeans	729,636
Manganese ores and concentrates	85,607
Ores and concentrates, n.e.c.	139,406
Coal and lignite	13,599,963
Limestone	565,358
Sand, gravel, crushed rock	1,281,056
Nonmetallic minerals, n.e.c.	490,779
Animal feeds	153,533
Vegetable oils, margarine, shortening	50,960
Pulpwood, log	577,578
Pulp	63,709
Standard newsprint paper	20,613
Paper and paperboard	98,410
Sodium hydroxide	255,343
Crude tar, oil and gas products	75,787
Alcohols	9,857
Sulphuric acid	46,801
Basic chemicals and products, n.e.c.	836,449
Fertilizer and fertilizer materials	455,440
Miscellaneous chemical products	61,263
Gasoline	421,721
Distillate fuel oil	498,777
Residual fuel oil	221,846
Lubricating oils and greases	28,404
Asphalt, tar and pitches	388,700
Coke, petroleum coke	480,561
Liquefied gases	13,138
Other petroleum and coal products	21,983
Lime	19,660
Building cement	475,789
Slag	42,480
Iron and steel products	348,803
Ferroalloys	81,138
Aluminum and alloys, unworked	49,630
Fabricated metal products	47,450
Machinery, except electrical	22,187
Iron and steel scrap	67,284
Waterway improvement materials	205,037
Miscellaneous	79,247
GRAND TOTAL	25,513,442

WILLAMETTE RIVER

SECTION: From Corvallis, Oregon, to the Willamette River's confluence with the Columbia River at Portland, Oregon - 132 miles

CONTROLLING DEPTHS: 2.5 to 8 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,277,592	23,248,472
1972	4,683,635	20,639,560
1973	4,411,295	20,227,999
1974	5,985,994	27,240,208
1975	4,999,407	21,538,874
1976	5,675,462	23,451,846
1977	5,186,344	60,233,056
1978	5,740,725	24,516,162
1979	4,999,732	23,612,153
1980	5,486,842	23,519,397
1981	3,876,402	18,641,034
1982	2,863,113	14,697,846

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1982

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Clay and clay products	--	16,309	16,309
Limestone	12,655	798	13,453
Sand, gravel, crushed rock	--	2,082,340	2,082,340
Grain mill products, n.e.c.	--	10,891	10,891
Rafted logs	--	398,176	398,176
Wood chips, staves, moldings	--	8,746	8,746
Pulp	--	24,400	24,400
Pulp and paper products, n.e.c.	--	155,686	155,686
Residual fuel oil	--	21,112	21,112
Waste and scrap, n.e.c.	--	130,000	130,000
Miscellaneous	--	2,000	2,000
GRAND TOTAL	12,655	2,850,458	2,863,113

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